ORIGINAL

EX PARTE OR LATE FILED

ORIGINAL

BLUMENFELD & COHEN
SUITE 300
1625 MASSACHUSETTS AVENUE, NW
WASHINGTON, DC 20036

202.955.6300
FACSIMILE 202.955.6460

http://www.technologylaw.com

SUITE 1170
4 EMBARCADERO CENTER
SAN FRANCISCO, CA 94111

415.394.7500
FACSIMILE 415.394.7505

July 13, 2001

RECEIVED

JUL 13 2001

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**via HAND DELIVERY**

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 Twelfth Street, SW, TW-A325
Washington, DC 20554

RE: Notice of Ex Parte Communications
ET Docket No. 00-258

Dear Ms. Salas:

On July 11, 2001, IPWireless, Inc. conducted a demonstration of its advanced broadband wireless technology in Greensboro, North Carolina, for Messrs. Julius Knapp, Deputy Chief, Office of Engineering and Technology, William Lane, Chief Technologist, Wireless Telecommunications Bureau and Keith Larson, Associate Bureau Chief for Engineering, Mass Media Bureau. Representing IPWireless during the demonstration were Roger Quayle, Chief Technology Officer, and Jeff Gordon, Director of Industry Relations, of IPWireless, and Jeff Blumenfeld, Larry Blosser and the undersigned of this law firm.

At the meeting, IPWireless described in detail and demonstrated live its state of the art, advanced broadband wireless technology to Messrs. Knapp, Lane and Larson. A copy of the presentation made by IPWireless preceding the demonstration is attached hereto. No regulatory issues were discussed beyond the extent IPWireless has previously commented to the Commission in written form in this proceeding. An original and one copy of this letter and the presentation used are being filed with your office. Should you have any questions regarding this matter, please call me.

Respectfully submitted,

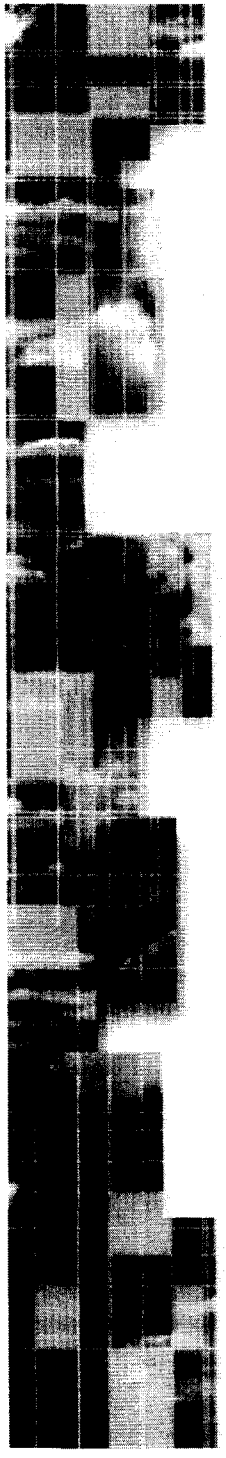
Jeremy D. Marcus

No. of Copies rec'd 0+1
List ABCDE

ORIGINAL

Enc.

cc: Julius Knapp
William Lane
Keith Larson



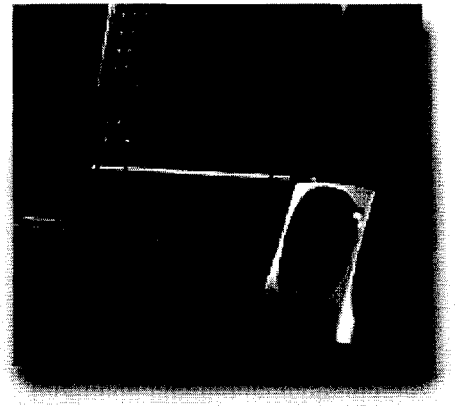
IPWireless

# Greensboro Trial Demonstration

*July 2001*

# The Mission of IPWireless

*Creating the Future Standard*
*for Broadband Wireless Internet Access*







IPWireless

# Agenda

- Company Overview
- Product Overview
- Technology Overview
- Development Roadmap / Status
- Greensboro Trial

IPWireless

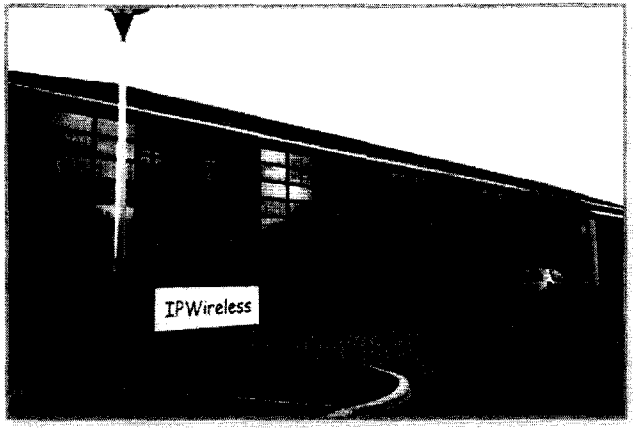
# IPWireless Strategy

- Develop a breakthrough technology for broadband wireless Internet access
- Work toward its adoption as the global *de facto* standard
- Deploy the technology in the US market, covering a significant number of pops
- Migrate towards separation of equipment and service companies

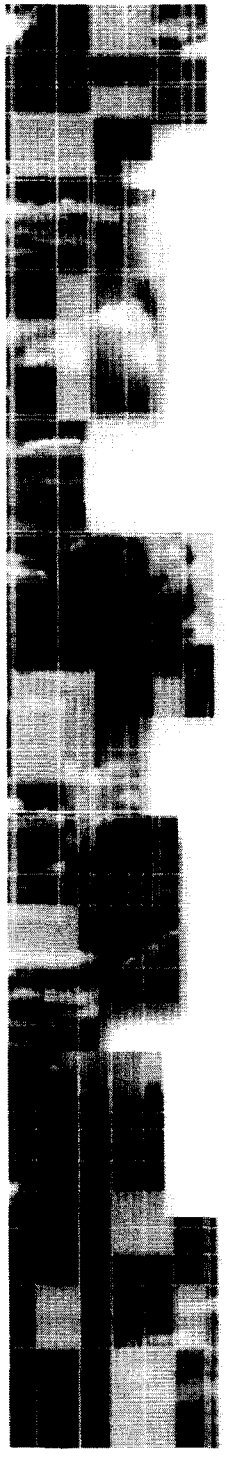
IPWireless

# Company Profile

- Combined benefits of European wireless expertise and Silicon Valley entrepreneurship
- Rapidly growing workforce
  - World-class team of over 100 engineers and contractors in UK focused on technology development
  - 3 regional offices in US
- Senior Management team in place
- Funded by leading VC firms
  - Over $120 Million funding to date, including Oak Hill (the Bass Family)
- First portable broadband in the world
  - 2-3 years ahead of competition




IPWireless

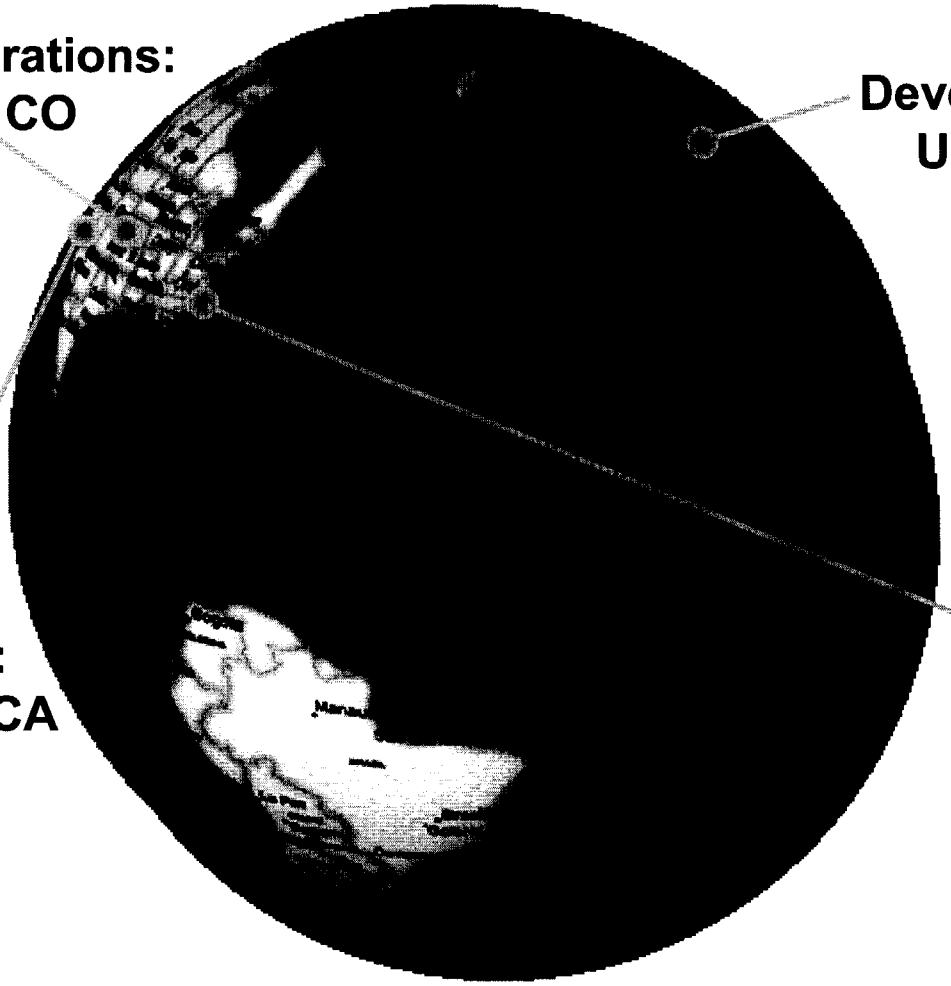


# World Class Leadership

- **Peter Howley – Chief Executive Officer (Exodus, Centex, MCI)**
- **Roger Quayle – Chief Technology Officer (Qualcomm, IWC)**
- **Dr. William Jones – EVP, Technology (Lucent)**
- **Craig Calle – Chief Financial Officer (Crown Cork, Salomon)**
- **John Lockton – Managing Director (IWC, Pacific Telesis)**
- **Malcolm Gordon – VP, Product Management**
- **Jack Fuchs – VP, Marketing Strategy (McKinsey & Co.)**
- **David Venn – VP, Market Development (C&W, Mercury)**
- **Wayne Leuck – VP, Engin. and Ops. (Qwest, US WEST, GTE)**
- **David Lamarre – General Counsel (Pillsbury Madison & Sutro)**

IPWireless

# Developing Resources Around the Globe



**Network Operations:**
**Denver, CO**

**Technology Development Center:**
**United Kingdom**

**Headquarters:**
**San Francisco, CA**

**Trial Center:**
**Greensboro, NC**

IPWireless

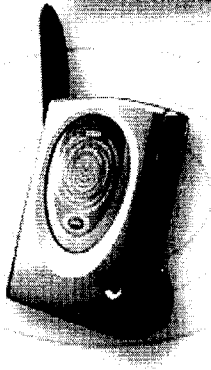
# Applications Are Endless For Consumers & Small/Medium Businesses

**Video Conferencing**

**Streaming Media**

**Distance Learning**

**Voice Over IP**



**Always-On Internet and Email**

**Ubiquitous, High Speed Web Browsing**

IPWireless

# Unparalleled Service and Product

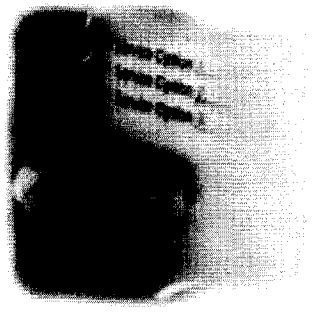
- Extremely high speed – 6Mbps
  - Over 100 times faster than dial-up
- First broadband wireless
  - No external wiring
  - Non line-of-sight
  - Go anywhere roaming
- Retail / Internet distribution
  - No wait for installation
- Plug and play installation
  - Extremely user friendly

# User Friendly Customer Experience: 3 Easy Steps

**1** ***Buy Modem at Retail Store / Internet***

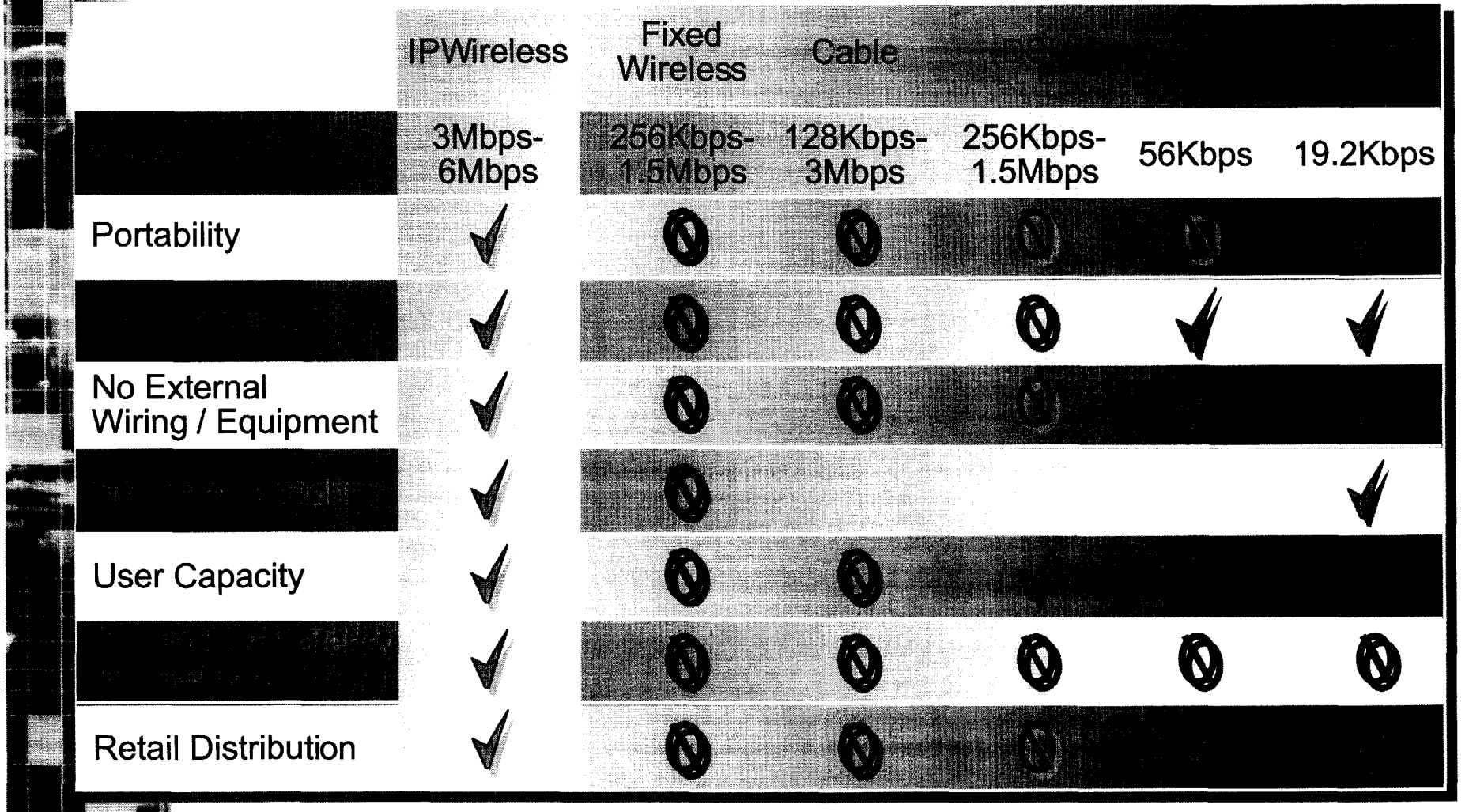
**2** ***Plug into Computer***

**3** ***Instant self-registration***



Connected

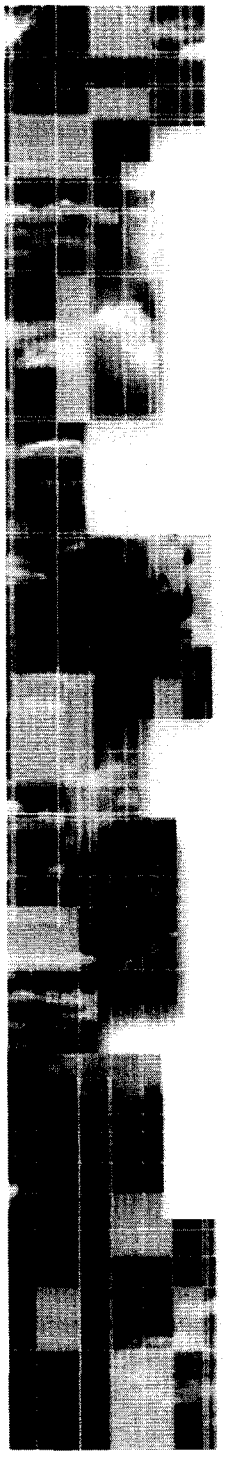
# How We Stack Up



# Consumer Benefits of IPW Technology

- Efficient spectrum use
  - **Inherent high capacity through N=1 frequency reuse and high data rates**
  - **Single channel (6 or 12 MHz) provides service in entire market**
  - **No wastage of channels for FDD guardband**
- Widespread availability of broadband
  - **Ubiquitous coverage of commercial and residential areas. No line of sight requirement**
  - **Designed for mass-market deployment**
  - **Scalable to semi-rural markets**
  - **Low cost - available to all income groups**
  - **Educational uses**
- Encouraging new technology
  - **Perfect combination of standards and innovation**
  - **Brings 3G to market early in the US.**
  - **W-CDMA provides the ultimate in performance when combined with multi code and interference cancellation.**

IPWireless

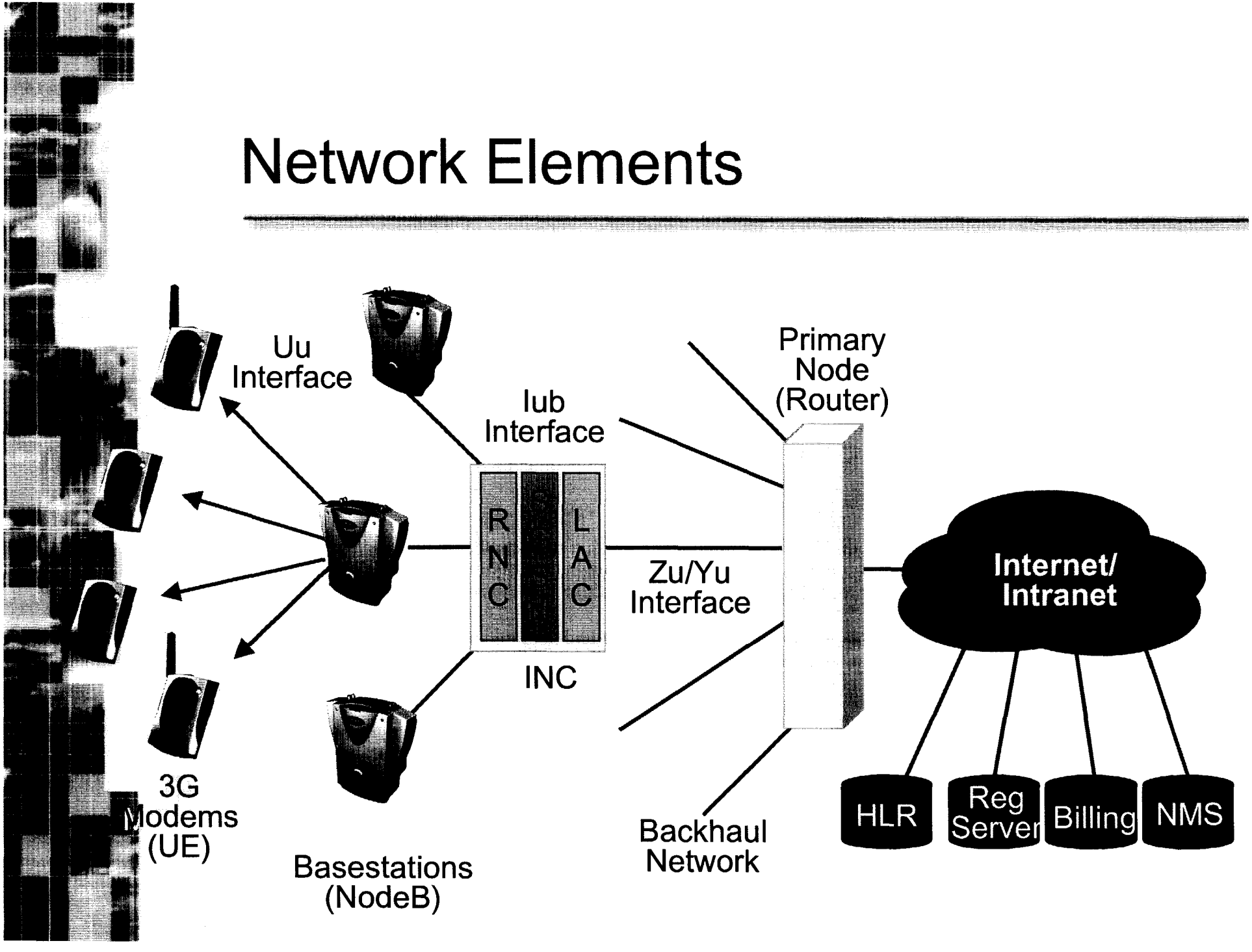


# IPWireless Technology

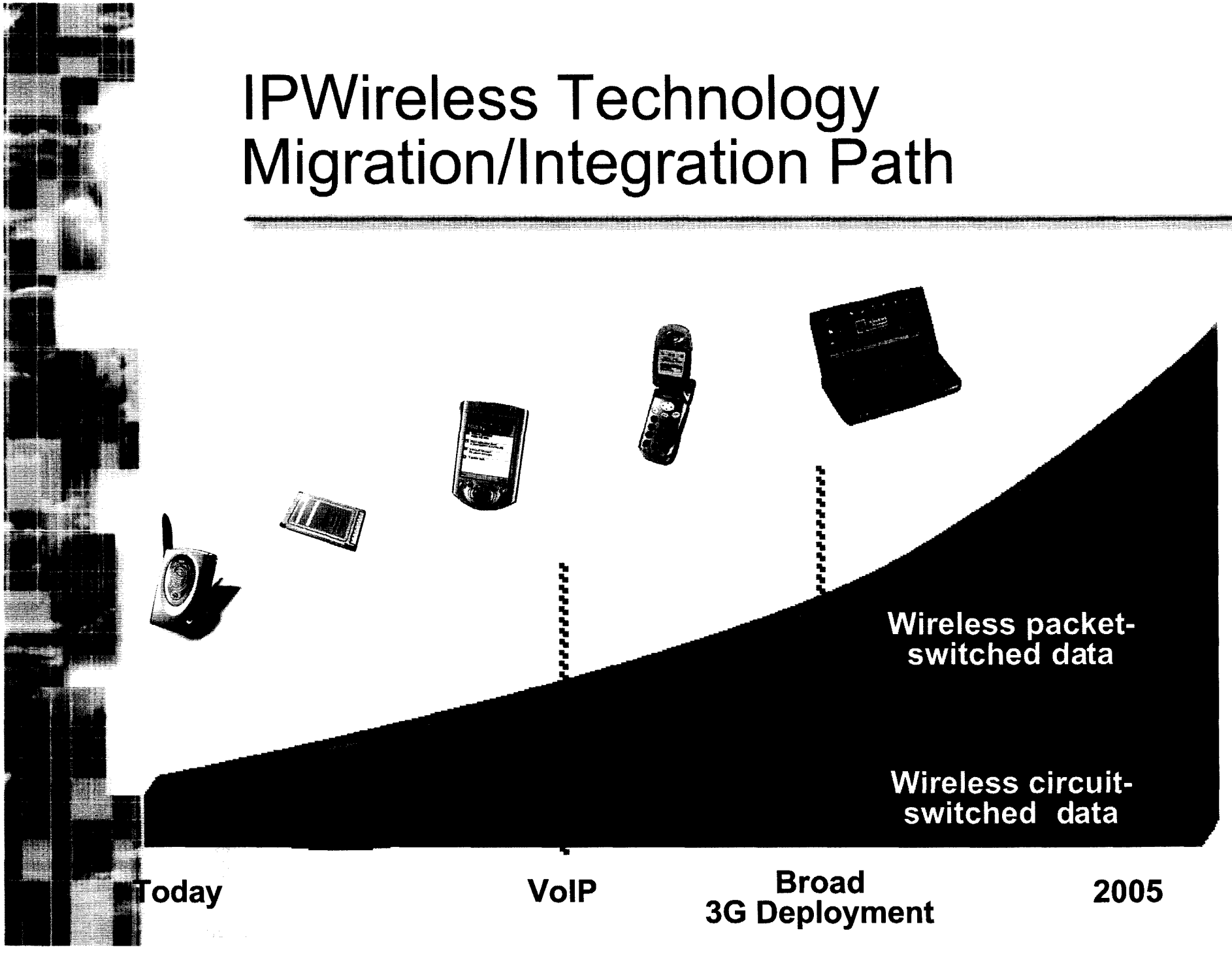
- UMTS compliant, W-CDMA, TDD (TD-CDMA), Packet data (not compromised by circuit switched voice)
- True N=1 frequency reuse
- Non LOS, multipath, building penetration
- Implemented and optimized for high data rates in large cells (typical cell radius 1.6 miles)
- Net user data rates up to 8 Mbps downlink (9 Mbps total up/down)
- Internet based authentication and self-registration
- Retail distribution with no provisioning

IPWireless

# Network Elements

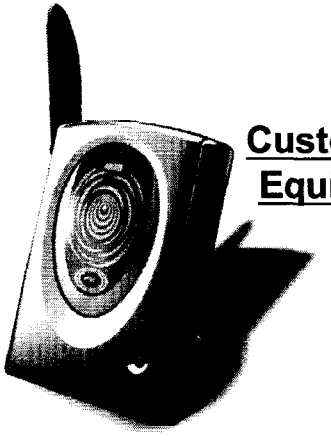


# IPWireless Technology Migration/Integration Path

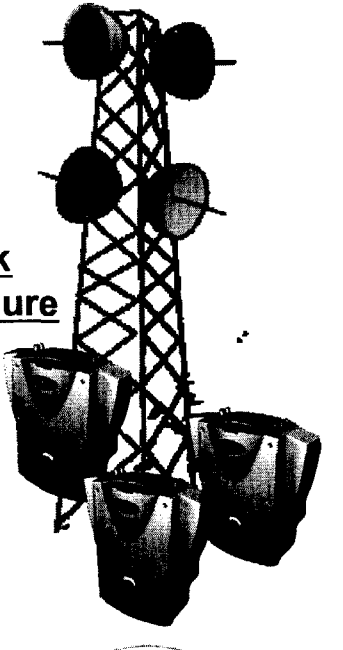


# Complete Network Solution Will Revolutionize Internet Access

- Extremely high bandwidth (6Mbps)
- Retail and Internet distribution
- Plug and Play service
- No line of sight - Portable
- "Always on" technology
- Very low cost CPE (~$300/unit)



Customer Premise Equipment (CPE)

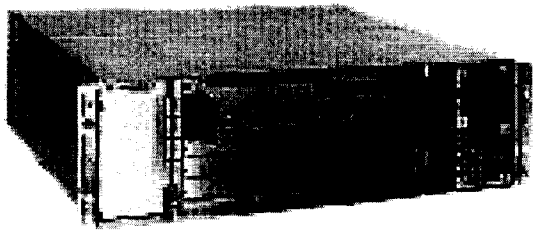


Network Infrastructure

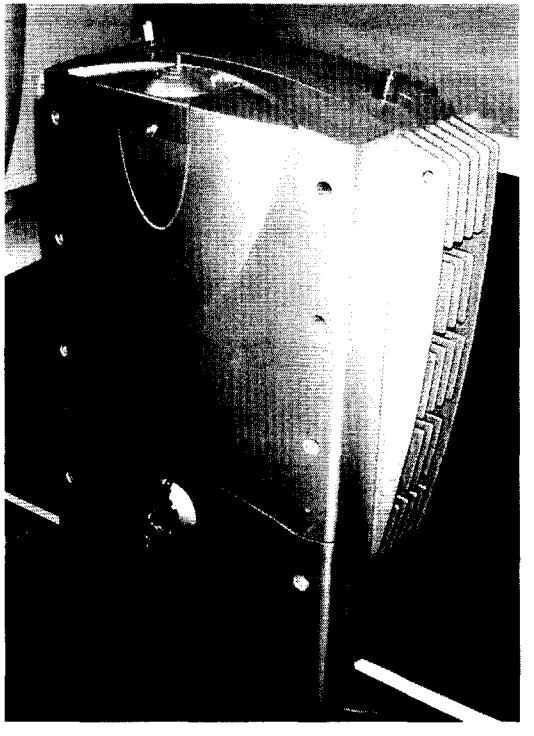
IPWireless

# Network - Rapid, Low-cost Deployment

- Distributed architecture
- Highly scalable
  - Very flexible due to N=1 reuse
  - From urban microcell to 8 km rural
  - Low cost to add incremental capacity
- IP core network
- High spectral efficiency
- Low cost per subscriber



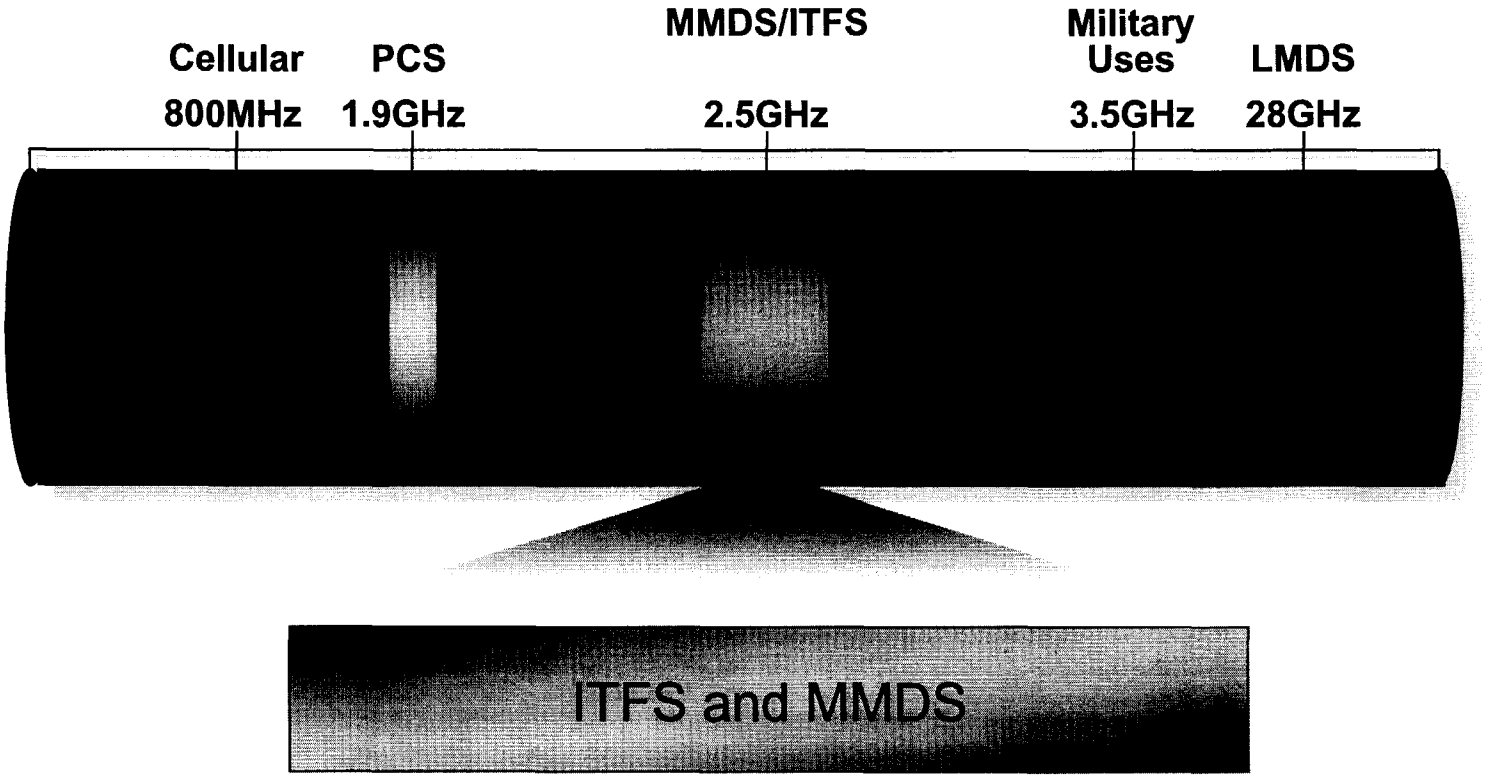
INC



Basestation

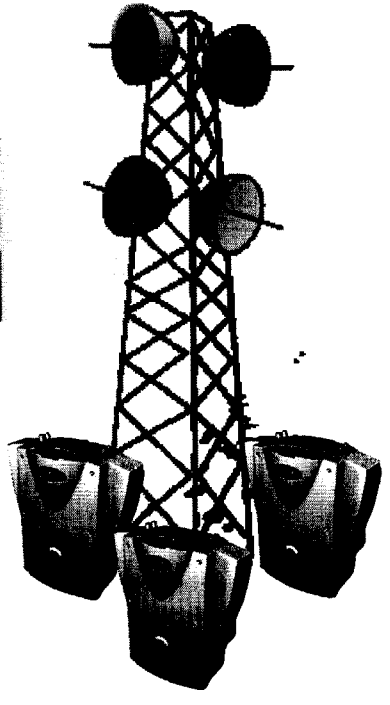
IPWireless

# Our Technology has Been Optimized for the Wireless Broadband Spectrum

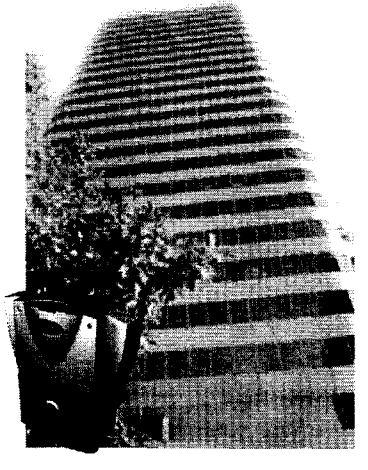



IPWireless

# Deployment Methods



Macrocell Omni
- 3 sector
- 6 Sector

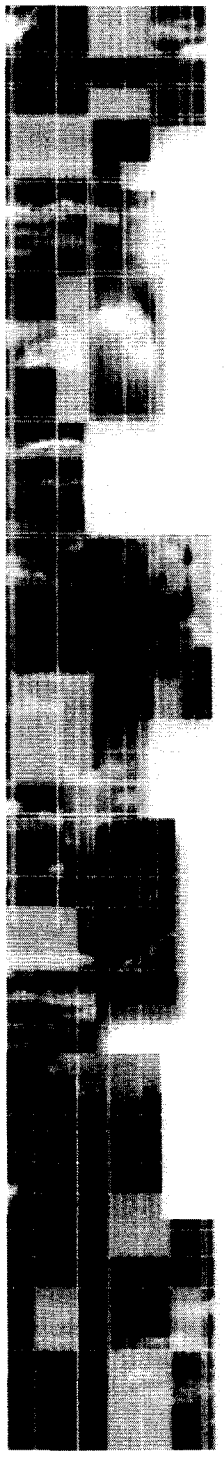


Outdoor microcell
- Omni
- Directional Panel

Airport Terminal

Indoor microcell
- Omni
- Directional Panel

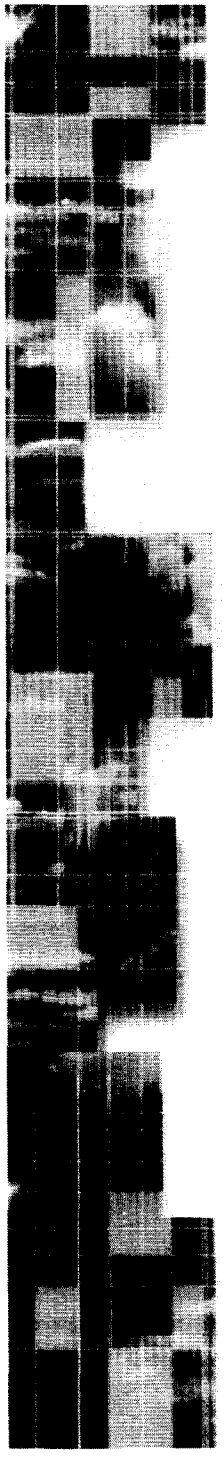
IPWireless



# Standards Based

- Access Network
  - UMTS UTRA TDD Release 99 compliant
    - W-CDMA standards-compliant air interface
    - Time Division Duplex (TDD) mode
    - Standard interfaces
- UMTS Core Network
  - GPRS SGSN functionality
    - UMTS / IP Interface
    - Session Management
  - RADIUS Home Location Register (HLR) replaces GSM HLR
  - Layer 2 tunneling to ISP / VPN, per subscriber

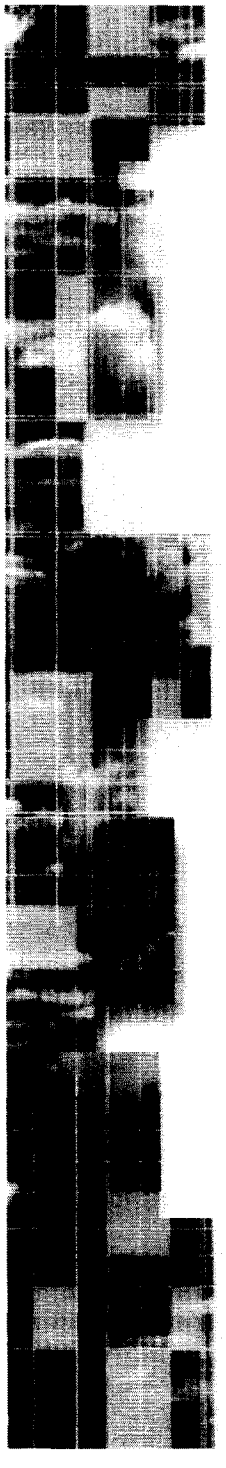
IPWireless



# Air Interface

- W-CDMA, 3.84 / 7.68 Megachip/sec
- Spreading factor - SF 1 thru 16
- Implemented for high data rates in multipath environment (UMTS 30-03 “channel B”)
  - Multicode
  - Joint Detection
  - Channel estimation and dynamic rate adaption
- Large cell (relatively for such high data rates)
  - > 150dB of system Gain

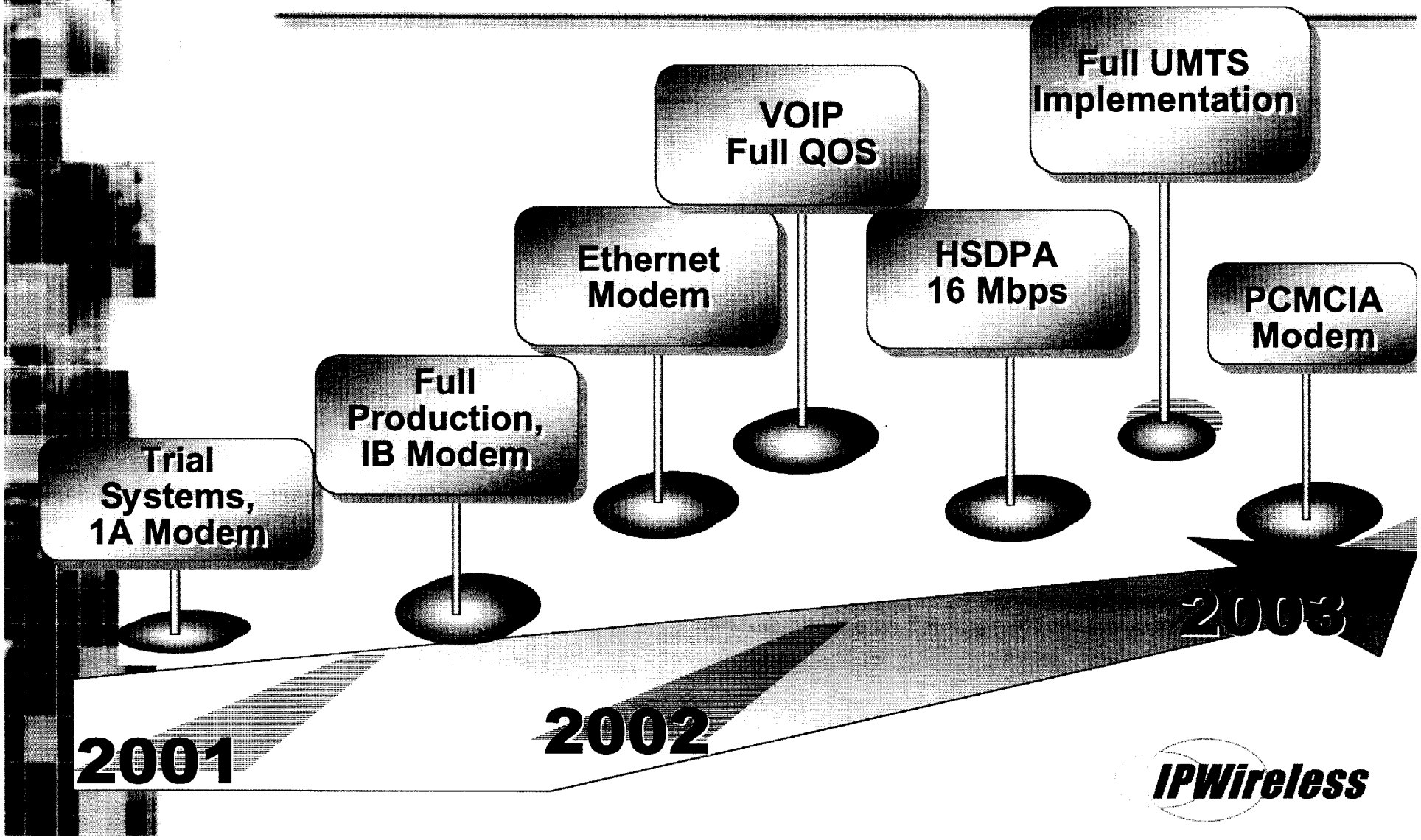
IPWireless



# Development Roadmap / Status

IPWireless

# Product Evolution




IPWireless